Rock Mechanics and Rock Engineering

Vol. 23 / 1990

Index





Springer-Verlag Wien New York

ISSN 0723-2632

Rock Mechanics and Rock Engineering

EDITOR

Professor K. Kovári, Swiss Federal Institute of Technology Zurich, ETH-Hönggerberg, CH-8093 Zürich, Switzerland

CG-EDITOR

Professor H. H. Einstein, Department of Civil Engineering, Room 1-330, Massachusetts Institute of Technology, Cambridge, MA 02139, U. S. A.

ASSISTANT EDITOR

A. Tisa, Swiss Federal Institute of Technology Zurich, ETH-Hönggerberg, CH-8093 Zürich, Switzerland

ASSOCIATE EDITORS

Professor Z. T. Bieniawski 122 Mineral Sciences Building Pennsylvania State University University Park, PA 16802 U. S. A.

Dr. E. Broch University of Trondheim Høgskoleringen 6 N-7034 Trondheim-NRH Mr. T. Franzén BeFo, Box 5501 S-11485 Stockholm Sweden

Professor B. Ladanyi Université de Montréal Case Postale 6079 succursale A Montréal H3C 3A7 Canada Professor R. Ribacchi Dipartimento di Ingegeneria Strutturale e Geotecnica Via Monte d'Oro, 28 I-00186 Roma, Italy

Professor S. Sakurai Faculty of Engineering Kobe University, Rokko Nada Kobe, Japan

ADVISORY BOARD

Dr. D. C. Banks Department of the Army Corps of Engineers Vicksburg, Miss. U. S. A.

Dr. N. Barton Norwegian Geotechnical Institute Oslo, Norway

Professor T. L. Brekke University of California Berkeley, Calif., U. S. A.

Dr. T. B. Celestino THEMAG Engenhario Ltda. Sao Paulo Brazil

Dr. H. Doležalová Department Head Ph. P. Praha, ČSSR

Dr. T. Durgunoğlu Boğaziçi University Istanbul, Turkey

Yu. A. Fishman "Hydroproject" Institute Moscow A-80, USSR

Dr. E. Gartung Landesgewerbeanstalt Bayern Nürnberg, F. R. G. Professor R. E. Goodman University of California Berkeley, Calif., U. S. A.

Dr. Gy. Greschik Institute for Geodesy and Geotechnics Budapest, Hungary

Professor H. Grob Swiss Federal Institute of Technology Zurich Zürich, Switzerland

Professor P. Habib Ecole Polytechnique Palaiseau, France

Dr. Massayuki Hori Electric Power Development Co. Ltd. Tokyo, Japan

Prof. K. W. John Ruhr Universität Bochum, F. R. G.

Dr. M. John Ingenieurgemeinschaft Lässer-Feizlmayr Innsbruck, Austria

Professor P. K. Kaiser Laurentian University Sudbury, Ontario Canada Professor M. Panet Société Havraise des Pétroles Paris, France

Professor M. Romana Polytechnical University Valencia Spain

Dr. P. Rossi ISMES Bergamo, Italy

Dr. K. Saari Technical Research Center of Finland Espoo, Finland

Professor O. Stephansson University of Luleå Luleå, Sweden

Professor S. Valliappan University of New South Wales Kensington, N. S. W. Australia

Dr. W. Wawersik Sandia National Laboratories Albuquerque, N. Mex. U. S. A.

Professor Weishen Zhu Institute of Rock and Soil Mechanics, Academia Sinica Wuhan, China

Index

Original Papers

Brosch, F. J.: Anisotropy of Dilation, 3-D Stress State and the Talobre Friction Cone	113
He, C., Okubo, S., Nishimatsu, Y.: A Study on the Class II Behaviour of Rock	261
Grandori, R., Lembo-Fazio, A., Ribacchi, R.: Excavation of the Ridracoli Hydraulic Tunnels Using a Double-Shield TBM	141
Kaiser, P. K., Zou, D., Lang, P. A.: Stress Determination by Back-Analysis of Excavation-Induced Stress Changes — a Case Study	185
Kittl, P., León, M., Díaz, G., Lillo, A.: Probabilistic Compressive Strength of Sound Dry Granite	21
Kobayashi, Y., Harp, E. L., Kagawa, T.: Simulation of Rockfalls Triggered by Earthquakes	1
Leung, C. F.: Computer Aided Design of Underground Excavations in Jointed Rock	71
Pan, YW., Chen, YM.: Plastic Zones and Characteristics-line Families for Openings in Elasto-plastic Rock Mass	275
Spang, K., Egger, P.: Action of Fully-Grouted Bolts in Jointed Rock and Factors of Influence	201
Wohua, Zh., Valliappan, S.: Analysis of Random Anisotropic Damage Mechanics Problems of Rock Mass. Part I — Probabilistic Simulation	91
Wohua, Zh., Valliappan, S.: Analysis of Random Anisotropic Damage Mechanics Problems of Rock Mass. Part II — Statistical Estimation	241
Zou, D., Kaiser, P. K.: Determination of In Situ Stresses from Excavation-Induced Stress Changes	167

Technical Notes

Drumm, E. C., Kane, W. F.: Interactive Graphics Driver for the Determination of Rock Joint Parameters	29
Kawakami, S., Kanaori, Y., Fujiwara, A.: Microcracks Induced in Granite Spheres by Projectile Impact at Velocities Ranging from 2.3 to 3.6 km/s	39
Newman, D. A., Bennett, D. G.: The Effect of Specimen Size and Stress Rate for the Brazilian Test — A Statistical Analysis .	123
Pang, S. S., Goldsmith, W.: Investigation of Crack Formation During Loading of Brittle Rock	53
Rohde, J., Feng. H.: Analysis of the Variability of Unconfined Compression Tests of Rock	231
Book Reviews	293
Announcements	295

Abstracted/Indexed in: Current Contents, SCI, and ASCA, Applied Mechanics Reviews

